



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,472	04/25/2005	Gerard Griffioen	50304/068001	5411

21559 7590 10/10/2007
CLARK & ELBING LLP
101 FEDERAL STREET
BOSTON, MA 02110

EXAMINER

JOIKE, MICHELE K

ART UNIT	PAPER NUMBER
----------	--------------

1636

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

10/10/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentadministrator@clarkelbing.com

Office Action Summary

Application No.

10/527,472

Applicant(s)

GRIFFIOEN ET AL.

Examiner

Michele K. Joike, Ph.D.

Art Unit

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 14-23 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 14-21, drawn to an engineered yeast cell comprising an amyloidogenic protein and lacking a functional caspase gene, and a method for identifying a compound which influences the toxic effect of amyloidogenic proteins in yeast.

Group II, claim(s) 22-23, drawn to a method for identifying the factors involved in the cytotoxicity of amyloidoses.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature is an engineered yeast cell with an amyloidogenic protein and a non-functional caspase. This element cannot be a special technical feature under PCT Rule 13.2 because the element is shown in the prior art.

The claims lack unity of invention because Applicants' invention is not novel. US 20060068472 (see paragraphs 81, 233 and 245) teach that Parkinson's disease affects about half a million individuals in the United States and previously has been considered a nongenetic disorder. Two genes are clearly associated with the disease: alpha-

Art Unit: 1636

synuclein (PARK1) and parkin (PARK2). Insights into the role of toxic proteins in neurodegenerative disease suggest rational approaches to treatment. First, blocking the expression or accelerating the degradation of the toxic protein can be an effective therapy. Because fragments of the toxic proteins may be more pathogenic than the full-length protein and specific cellular localization may enhance toxicity, blocking proteolytic processing and intracellular transport are reasonable approaches to treatment. Other therapeutic strategies include inhibiting the tendency of the protein to aggregate (either with itself or with other proteins), up-regulating heat shock proteins that protect against the toxic effects of misfolded protein, and blocking downstream effects, such as triggers of neuronal apoptosis. Overexpression of heat shock protein can reduce the toxicity of both mutant polyglutamine and mutant alpha-synuclein and caspase inhibition can reduce the toxicity of both polyglutamine and mutant SOD, indicating that therapeutic interventions of this type may apply across multiple neurodegenerative diseases. Pharmaceutical screens are now under way to identify agents that block the expression or alter the processing and aggregation of the toxic proteins responsible for neurodegenerative disease, or mitigate the harmful effects of these proteins on neuronal function and survival. The host cell used for expression can be yeast. Therefore claim 1, claiming an engineered yeast cell with an amyloidogenic protein and a non-functional caspase, is anticipated by US 20060068472.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

Art Unit: 1636

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michele K. Joike, Ph.D. whose telephone number is 571-272-5915. The examiner can normally be reached on M-F, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on 571-272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nancy T. Vogel/
Primary Examiner, 1636

Michele K Joike, Ph.D.
Examiner
Art Unit 1636